CASE IN HINDI

Andrew Spencer

University of Essex

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Abstract

I argue that Hindi clitic postpositions are not markers/realizations of case. Hindi has a genuine case system represented by the direct, oblique and vocative inflected forms of nouns. So-called case markers such as *ne* 'Ergative' or *ko* 'Accusative/Dative' are better thought of as postpositions which are non-projecting words (Toivonen 2003), selecting the oblique case form of their noun complements. Since the postpositions fail to project a phrase the case property of the head noun will be inherited by their NP/DP argument, so that any NP/DP marked with a postposition will itself be in the oblique case. Predicate agreement can now be stated very simply as 'agree with the direct case marked NP'.

1.   Introduction[1]

The question of what counts as a case is one which has not been at the forefront of recent morphosyntactic research, yet it remains one of the more puzzling questions in theoretical linguistics. The prototypical case system is the type illustrated by Indo-European languages such as Latin, Greek, Sanskrit and most of the contemporary Slavic languages. In such a system nouns bear inflections which subserve various grammatical functions, such as the marking of subjects and objects. Sometimes a case will have an essentially semantic use, say, as a locative, or for the vocative case a special discourse function. Often particular prepositions or postpositions govern specific case forms. Finally, attributive modifiers (and more rarely predicates) will often agree in case with the head noun they modify. In Indo-European languages the form of a case marked nominal will often depend on the grammatical number and on inflectional class. However, the inflectional endings are entirely different from each other (and different again from those of various other inflectional classes). Therefore, it is necessary to set up an abstract CASE attribute which can permit us to generalize over these forms. However, I will make the assumption that the situation with the English translation equivalents of the Latin genitive is rather different. The preposition *of* is neither a case itself nor a marker of case. In order to state the fact that, say, possessive constructions are expressed by *of* we need simply make direct reference to *of* as a lexical item, just as we make direct reference to the preposition *with* without invoking a comitative, instrumental or whatever case.

Considerations of this sort have lead Beard (1995) to question whether an attribute of case is needed even in languages in which nouns appear to inflect for case, but in which there are no inflectional class differences. In languages such as Turkish the same case suffixes with the same allomorphy are used for all nominals. According to Beard, this means that a CASE attribute is redundant in the grammar of such languages. We can state the distribution of case-inflected nominals by referring directly to the form of the nominal. Thus, rather than speaking of, say, the genitive case form of Turkish *ev* 'house' we can speak of the *-In* form, *ev-in* (or in the plural *evler-in*). Internal to the grammar of Turkish nothing is lost in doing this (see Beard 1995: 259f). In Spencer and Otoguro (2005) this is referred to as 'Beard's Criterion'. Even if we baulk at the idea that an agglutinative affixal paradigm fails to define a case system in Turkish, it is difficult to

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fault Beard's logic where adpositional systems are concerned, whether those adpositions are expressed as syntactic heads or as phrasal affixes.

2.   Morphosyntactic preliminaries

Following Zograf (1960, see also Masica 1991) we can distinguish three 'layers' of functional category marking on Indo-Aryan nominals. The first layer is inflection proper. In Hindi nouns may inflect for singular/plural number and for three forms, which I shall call the direct form, the oblique form and the vocative form. Later I shall refer to these three forms as 'cases'. However, for the present I shall call them 'forms' so as not to introduce terminological confusion. Inflection is illustrated for a representative sample of nouns in (1)[2]:

(1)   Inflected noun forms (Zograf Layer I)

	Singular	Plural		Singular	Plural
Direct	laRkaa	laRke		makaan	makaan
Oblique	laRke	laRkõ		makaan	makaanõ
Vocative	laRke	laRko			
	'boy' (Masculine)			'house' (Masculine)	

	Singular	Plural		Singular	Plural
Direct	laRkii	laRkiyãã		mez	mezẽ
Oblique	laRkii	laRkiyõ		mez	mezõ
Vocative	laRkii	laRkiyo			
	'girl' (Feminine)			'table' (Feminine)	

Adjectives may take similar inflections, except that the vocative form is always identical to the oblique form. Forms for *acchaa* 'good' and the demonstrative *yah* 'this' are given in (2) (the demonstrative does not inflect for gender):

(2)   Hindi adjective inflection

		Masc	Fem	
Sg	Dir	acchaa	acchii	yah
	Obl	acche	acchii	is
Pl	Dir	acche	acchii	ye
	Obl	acche	acchii	in
		'good'		'this'

Inflecting modifiers agree with the noun head in number, gender and direct/oblique form, as seen in (3) (based on Dymšits 1986a: 78, 79):

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[2] In the Hindi transcriptions, 'R' represents a retroflex rhotic and doubled vowels are long.

(3) Examples of Hindi adjective agreement

direct	Sg	acchaa	laRkaa	acchii	laRkii
	Pl	acche	laRke	acchii	laRkiyãã
oblique	Sg	acche	laRke	acchii	laRkii
	Pl	acche	laRkõ	acchii	laRkiyõ
		'good boy(s)'		'good girl(s)'	

The same pattern of agreement is found when a declinable modifier is in construction with an indeclinable noun such as *ghar* 'house', so that 'good house' in the oblique singular form is *acche ghar*, while the direct singular form is *acchaa ghar*. This shows that the inflectional system forms a paradigm in which some forms for some lexical classes are syncretic.

These desinences show all the typical behaviour of inflectional affixes, as outlined in (4) (see Payne 1995: 284):

(4)   Properties of Zograf Layer I desinences
   • They must be repeated on each noun of a conjoined phrase (though see below for asyndetic compounds)
   • They trigger agreement on attributive modifiers and must be repeated on all (inflecting) modifiers within the NP

Although the oblique stem form is frequently found in construction with a Layer II simple postposition, this form can exist as an inflected word in its own right, generally with a locational destination meaning, as seen in (5, 6) (Mohanan 1994a: 88, 89):

(5)   raam   kalkatte   gayaa
       Ram.NOM   Calcutta.OBL   go.PERF
       'Ram went to Calcutta'

(6)   raam   mere   ghar   aayaa
       Ram.NOM   my.OBL.MASC.SG   house.OBL.MASC.SG   come.PERF
       'Ram came to my house'

Notice that in (10) the head noun *ghar* does not overtly inflect for the oblique form, but its obliqueness is unambiguously signalled by the form of the modifier 'my'.

The second of Zograf's layers is found with a small number of postpositional clitics (phrasal affixes). I shall follow traditional descriptive practice and refer to these as 'simple postpositions'. The simple postpositions are used to realize grammatical functions such as (transitive) subject (*ne*), direct object (*ko*), indirect object (also *ko*) as well as a variety of adverbial functions. In the recent literature this has been taken to reflect a fully fledged case system, as illustrated in (7) (taken from Mohanan 1994a: 66):

(7)   nominative   (zero)
      ergative   ne
      accusative   ko
      dative   ko
      instrumental   se
      genitive   kaa
      locative1   mẽ
      locative2   par

Each of these postpositions is invariable except for *kaa*, which agrees with the possessed noun. That behaviour is extremely unusual for a case marker though it parallels the morphosyntax of the Albanian 'genitive clitic' and the Bantu 'A-of-association', neither of which are cases. The *ko* postposition is systematically ambiguous, in the sense that it marks either a direct object or an indirect object (though speakers generally reject clauses containing two adjacent *ko*-marked phrases. For detailed discussion of 'double *ko*' clauses see Mohanan 1994b).

There is general agreement that the postpositions are clitics (not affixes) (Butt and King 2003, Mohanan 1994a, Payne 1995). There is, however, one interesting twist in the behaviour of one of the postpositions, *ko*. With personal pronouns there is an alternative realization of the sequence 'pronoun + *ko*', as illustrated in (8) (Dymšits 1986a: 99):

(8)

	1sg	2sg	3sg	1pl	2pl	3pl
Direct	mãĩ	tuu	yah	ham	tum	ye
Oblique	mujh	tujh	us	ham	tum	in
Dative/ Accusative	mujhe	tujhe	use	hamẽ	tumhẽ	inhẽ

The synthetic forms are synonymous with the more regular forms constructed from the oblique form and *ko*: *mujh=ko*, *tujh=ko* and so on. This is discussed below.

3.   Why postpositions are not cases

In order for a formative within a noun phrase to be considered a case within the grammatical description of a language that formative must minimally serve as a marker of a grammatical relationship of some kind between some other head and that noun phrase as its dependent. However, this is only a necessary condition, since it would admit English-type prepositions as case markers (whether cliticized or not). There is no point in setting up a [CASE] attribute, either in syntax or morphology, unless that attribute generalizes over sets of distinct forms in some way. The most obvious need occurs with inflectional classes such as those of Latin, where we need to generalize across distinct morphological forms (e.g. the genitive singular and plural, not to mention distinct declension classes). A more subtle requirement is found in syntax: if we find that attributes must agree with their modified heads in a noun phrase then, prima facie, we would miss important generalizations unless we appealed to a [CASE] attribute in the syntax, so that we could state the recurrent case marking as a general phenomenon, and

so that we could distinguish the case formatives from other, non-agreeing, formatives such as postpositions. These latter instances of noun marking constitute sufficient criteria for casehood.

The Layer II postpositions show no properties which can be taken as sufficient criteria for casehood. In particular they fail to trigger the kind of agreements on modifiers that the Layer I inflections trigger. The only reason for labelling Layer II elements as cases is that they serve to mark grammatical functions, including the function of SUBJECT, but this is only a necessary criterion, not a sufficient one. To be sure, by giving the postpositions case names we can state typological generalizations. For instance, we can say that certain classes of verbs take 'dative' subjects. However, this is not a very good reason for setting up a (second) CASE attribute in the grammar of Hindi. Similar reasoning would force us to claim that the preposition *of* is a genitive case marker in English, for instance. Actually, matters are worse than this. It is not just that nothing is gained by ascribing a CASE attribute to Hindi postpositions. The postpositions-as-cases thesis actually prevents us from making generalizations. To see this we must consider predicate agreement.

Verbs agree with (highest ranking) nominative-marked argument (i.e. unmarked, no postposition, direct case). This may be SUBJ or OBJ.

(9) a.   acchaa   laRkaa   gaRii   calaataa   hai
          good.M.NOM.SG   boy.NOM.SG   car.NOM   drive.IMPF.M.SG AUX
          'The good boy drives a car'
     b.   acche   laRke=ne   gaRii   calaayii   hai
          good.M.OBL.SG   boy.OBL.SG=NE   car.NOM   drive.PERF.F.SG AUX
          'The good boy has driven a car'

There are several points to bear in mind. First, the agreement process cannot be defined solely in terms of the pure forms of nouns. For instance, a form such as *ghar* 'house' can be either NOM SG or OBL SG. When followed by a postposition such as *ko* it will not trigger agreement, but when it appears in its clause as a bare noun subject or object it may trigger agreement. Thus, agreement must make reference to some kind of CASE feature.

Second, note that predicate agreement on lexical verbs is defined in terms of the attributes CASE NOM, GENDER and NUMBER attributes. Now, adjectival modifiers may agree with their head noun for these attributes, too. This poses no problems in the case of GENDER and NUMBER, since these attributes are clearly the same whether they trigger agreement on modifiers or on predicates. In other words, we can use the same features to express the agreement of the predicate with the MASC SG noun 'boy' in (9a), that we use to express the GENDER/NUMBER agreement between the adjective *acchaa* 'good' and *laRkaa* 'boy' in that clause.

However, when we come to examine CASE agreement we encounter a problem. The reason that the forms *acchaa* and *acche* agree in case with *laRkaa* and *laRke* respectively in (9a, b) is because the forms {*laRkaa, laRke*} are in a paradigmatic (inflectional) opposition to each other. However, given the postpositions-as-case analysis the verb form

in (9) shows agreement with the subject or object of the clause by virtue of the fact that the subject or object NP is not in construction with a 'case' postposition. The direct/oblique distinction plays absolutely no role in predicate agreement on that approach. Put differently, the value NOM is being used with a systematic, but unacknowledged, ambiguity. In predicate agreement it is part of the paradigm {NOM, ACC, DAT, GEN, ...}. In modifier agreement it is part of the paradigm {NOM, OBL, VOC}. But this means that we are dealing with two distinct case features and two distinct sets of case values, CASE1 {NOM1, ACC, DAT, GEN, ...} and CASE2 {NOM2, OBL, VOC}.

Yet it seems more than perverse to treat CASE2 NOM as being a distinct attribute from CASE1 NOM with respect to agreement. In all other respects, agreement is defined over the same features sets (reflecting the adjectival, participial origin of the agreeing verb forms). We seem to be losing a generalization if we concede that we are operating with two distinct notions of case. In addition, recall that a bare oblique-marked noun such as *kalkatte* 'Calcutta.OBL' can be used with a locative-directional function. But what is the relationship between that bare oblique form and a NP furnished with a locative postposition such as *mẽ* 'in'? Specifically, what set of oppositions is being presupposed here. Are we going to be obliged to say that CASE2 OBL forms are also in a paradigmatic opposition to CASE1 {NOM1, ACC, ...} forms? In that case it would seem that we have just a single CASE attribute after all. But then how do we account for the fact that a postposition such as the 'ergative' *ne* or the 'accusative/dative' *ko* selects the oblique ('locative?') case form and not the 'nominative' case form? Surely that would be little different from saying that the German preposition *von* 'of' is a genitive case marker which selects the dative case of its NP.

In short, the different behaviour of predicate agreement and modifier agreement with respect to the case attribute leads to complete conceptual confusion if we adopt the simplest version of postpositions-as-cases approach. In the next section, I outline explicit discussion of this problem in the LFG literature.

4. Previous treatments

Some of the issues raised here have been discussed in the work of Butt and King (especially 2004). They treat the Layer II postpositions as members of a (projecting) category K, distinct from P. They do not address the question of modifier agreement for direct/oblique/vocative case. The only discussion in the LFG literature I know of which takes seriously the questions I have raised here is that of Mohanan (1993). She notes that a direct object in Hindi may be marked by *ko* if it is regarded as animate or if it is definite, otherwise the bare form of the noun is used. She contrasts two ways of looking at this situation. On the 'morpheme alternation' analysis we would say that the bare NP object and the *ko* marked object were in the accusative case and that this case marking is realized differently in different contexts. On the 'feature alternation' analysis some objects are accusative (those with *ko*) and some are nominative (bare NPs). Mohanan argues persuasively in favour of the 'feature alternation' view over the 'morpheme alternation' view.

Crucial for our purposes is the way that Mohanan treats modifier agreement vis-à-vis predicate agreement. She assumes a CASE attribute with the standard values {nom, acc, dat, ...}. She then sets up a property NON-NOM which essentially means 'any value of CASE except NOM'. The NON-NOM property thus corresponds to the inflectional oblique case form of nouns and the corresponding agreement form in modifiers. Modifier agreement appeals to both the NOM and NON-NOM properties, while predicate agreement is sensitive solely to the NOM property.

It is not entirely clear from Mohanan's exposition how the {NOM, NON-NOM} distinction is to be interpreted formally. For Mohanan a NP is 'in a case' by virtue of the clitic postposition to its right edge. But that means that the NON-NOM form of a noun (or adjective for that matter) is not 'in' any case until the NP is furnished with a postposition (see Mohanan's example (25b)). But this means that it is rather misleading to speak of NON-NOM as a case value, rather it picks out a set of forms which receive a case value from a postposition. But that makes it difficult to see how modifier agreement can be stated. On the one hand NON-NOM is a property of a head noun which is not inherited by the NP as a whole. There are no NP-external syntactic processes in Hindi which appeal to the NON-NOM property. On the other hand, NOM is a property both of head nouns and of complete NPs and it is this property that governs predicate agreement.

There are two interpretations of the NON-NOM property which would elucidate this analysis. Under one interpretation we would say that NON-NOM stands for a special feature which is defined as the negation of NOM. On the other interpretation, we complicate the feature geometry for CASE and regard NON-NOM as a set-valued attribute which takes the other cases {ACC, DAT, GEN, ...} as values. Neither of these interpretations seems to be a desirable extension of standard practice. The first interpretation means that modifier agreement essentially says 'use the NOM form of the modifier unless the NP has a non-zero, non-locative postposition, in which case use the NON-NOM form'. Note that on this interpretation it is necessary to assume two distinct zero case postpositions, one for NOM, the other for the bare noun locational. The second interpretation essentially says 'use the NOM form of the modifier if the NP is marked 'NOM' and use the NON-NOM form of the modifier if the NP appears in any other case'. This principle, too, has to be supplemented by reference to a NOM zero case postposition as opposed to a locational zero postposition. A bare NON-NOM noun is not 'in a case' purely by virtue of being in that form and its case has to be provided by a zero marker in order for the modifier to recognize that the NP as a whole is in a non-nominative case.

The complications are only needed because of the desire to conflate two distinct sets of properties, namely, the Layer I inflectional system of nominative and oblique case and the Layer II system of clitic postpositions. But by Beard's Criterion it is only the Layer I system which has any of the important properties of a case system.
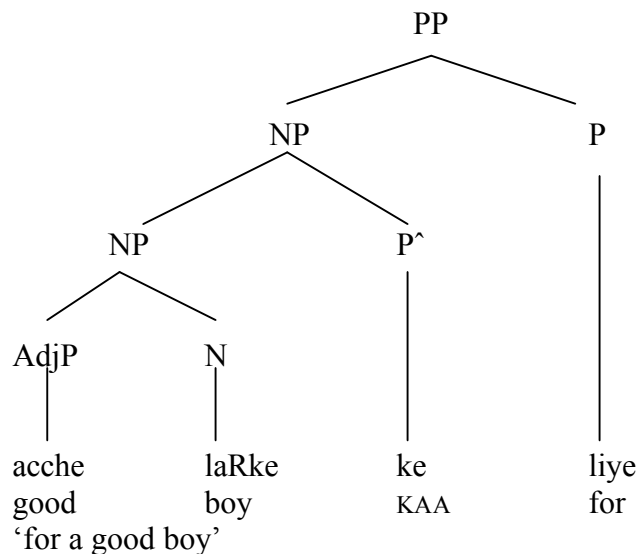
5.   Proposal[3]

In the analysis I propose the inflectional paradigm of a noun includes the attribute [CASE: {NOMINATIVE, OBLIQUE, VOCATIVE}]. In addition Hindi appeals to a syntactic CASE attribute which plays a role in agreement and government phenomena and which is realized by the corresponding morphological attribute. In other words, an NP marked CASE NOM or CASE OBL, say, has that case realized by the appropriate inflected form of the head noun of that NP. In order for the analysis to work smoothly it is helpful to assume that the CASE attribute is an obligatory part of any complete f-structure corresponding to a complete NP in c-structure. In other words, CASE is an obligatory morphosyntactic category in Hindi.

The Layer II postpositional markers are clitics or phrasal affixes, taking the form of non-projecting words (Toivonen 2003), adjoined directly to the right edge of the NP which serves as their complement. Toivonen suggests that such non projecting words generally adjoin to a lexical head in syntactic representation, but there's no need to assume this and I shall propose that the Hindi postpositional clitics adjoin to the NP (or DP if you assume that Hindi has such a category). The category of the NP to which the postposition is adjoined will remain NP. In this respect, the NP=postposition complex is similar to a case-marked NP in languages with genuine case systems. The proposed analysis of the case postpositions is virtually identical to the analysis proposed by Sharma (2003) for the Hindi emphasis particle *hii* (though not to her analysis of the 'case' postpositions).

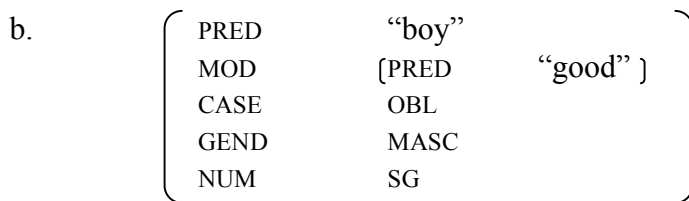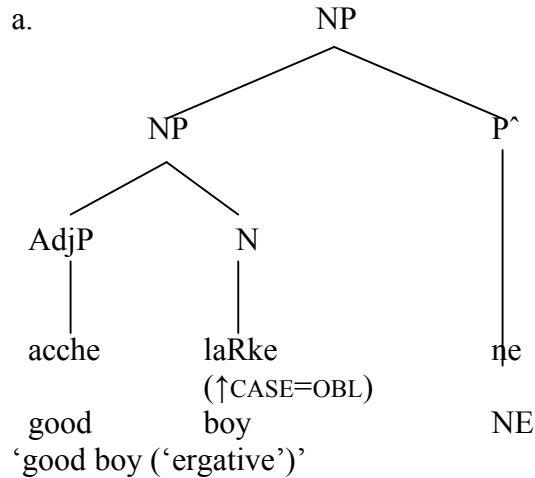The analysis is illustrated in (10), where P^ indicates a non-projecting category:

(10)   Case clitic as non-projecting postposition

acche   laRke   ke   liye
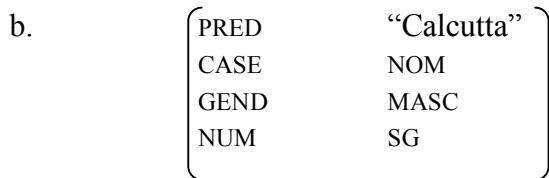good   boy   KAA   for
'for a good boy'

I am assuming that all NPs have an obligatory CASE attribute in their f-structures. The value of this CASE attribute comes from the inflected form of the head noun. As a lexical property, all non-projecting postpositions select the CASE OBL form of the NP. This means that the head noun bears morphological oblique case. Because the postpositions fail to project, the category of the phrase they form is no different from that of their host, and in particular the CASE value remains the same, that is CASE OBLIQUE. This is illustrated in (11):

(11)   Case clitic as non-projecting postposition

a.

```
                          NP
                  _____
                 /              \
               NP                P^
            _____               |
           /      \              |
        AdjP        N            |
          |         |            |
        acche     laRke         ne
                (↑CASE=OBL)
        good       boy          NE
     'good boy ('ergative')'
```

b.

$$
\begin{bmatrix}
\text{PRED} & \text{``boy''} \\
\text{MOD} & [\text{PRED} \quad \text{``good'' }] \\
\text{CASE} & \text{OBL} \\
\text{GEND} & \text{MASC} \\
\text{NUM} & \text{SG}
\end{bmatrix}
$$

We may contrast (11) with (12, 13) in which we see the noun *kalkataa* 'Calcutta' in its bare nominative form and in its oblique form (which could be used as a directional complement to a verb of motion):

(12)   a.   kalkataa: (↑CASE=NOM)

b.

$$
\begin{bmatrix}
\text{PRED} & \text{``Calcutta''} \\
\text{CASE} & \text{NOM} \\
\text{GEND} & \text{MASC} \\
\text{NUM} & \text{SG}
\end{bmatrix}
$$

(13)   a.   kalkate: (↑CASE=OBL)

   b.   ⌈ PRED   "Calcutta" ⌉
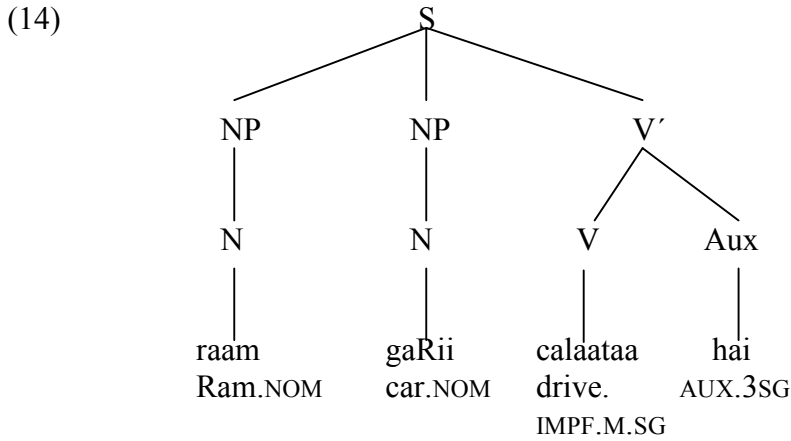 | CASE   OBL |
              | GEND   MASC |
              ⌊ NUM   SG   ⌋

The proposed analysis permits us to unite modifier and predicate agreement in a natural fashion. The predicate agreement principles for lexical verb forms seek out an appropriate CASE NOM NP to trigger agreement (as in Mohanan's formulation above). On the other hand, the modifier agreement principles operate over CASE {NOM, OBL} (we can assume that vocative case is syncretized with oblique case on the modifiers themselves). But notice that in both modifier agreement and predicate agreement, some head (adjective or verb) agrees in CASE NOM with either a head noun or a noun phrase. There is no prevarication over ambiguous case labels. Thus, in (9a) above, the adjective *acchaa* 'good' and the verb form *calaataa* 'driving' are both in the CASE NOM form and this is ultimately because the head noun *laRkaa* 'boy' is in the CASE NOM form. Likewise, in (9b), *acche laRke ne* 'good boy' is in the CASE OBL form (not CASE ERGATIVE!) and for that reason only modifier agreement can apply to that phrase.
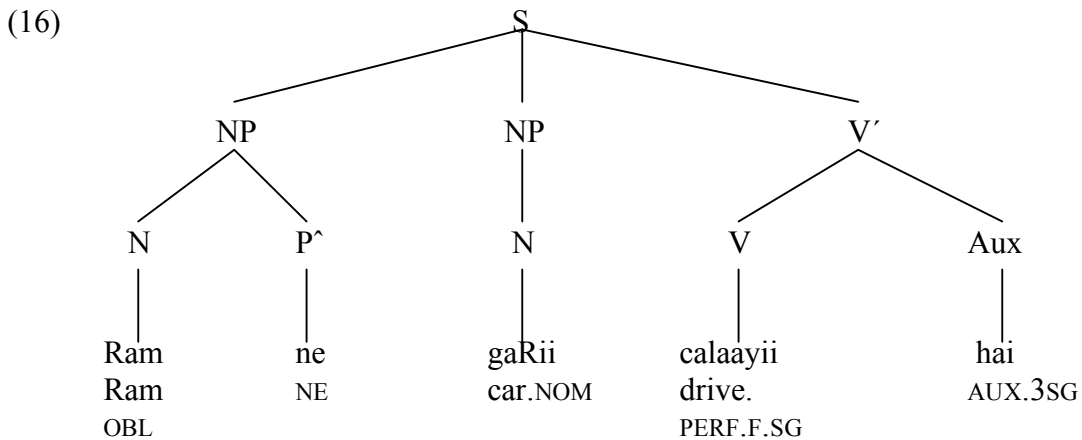
By appealing to Toivonen's notion we have achieved our goal. The whole of the Hindi nominal system can now be given a simple, but unified, treatment. The selection of the postpositions themselves still has to be defined, however. Now, in the postpositions-as-cases analysis the postpositions project two sorts of information, one governing the grammatical functions themselves and the other a CASE label. We dispense with the CASE label for the postpositions in this analysis, since that label is completely superfluous. The postpositions themselves can be readily identified by virtue of their form. Thus, we may assume a feature, FORM, which defines the morphophonological shape of a lexical entry. In the case of *ne* we will have FORM NE, while for *ko* we will have FORM KO. Nothing more need be said. Where in previous analyses we might have postpositions realizing or constructing specific grammatical functions and supplying CASE labels, now they serve solely to realize the grammatical functions (and various semantico-syntactic properties of those functions). However, the postpositions do not define a CASE value at f-structure. That attribute is determined by the form of the head noun of the NP.

We capture the Layer I, II, III distinction categorially. The troublesome member of the triple is the Layer II set, the postpositions. These are distinct from true postpositions because they fail to project a PP node, but they are different from Layer I inflections because they themselves are words. In this way the non-projecting word plays the same role as the KP vs. NP/DP distinction in Butt and King (2004). However, because the postpositions are non-projecting we automatically have an account for why they fail to show the full panoply of X-bar syntax. One final point is that the *kaa* marker gives to an NP the agreement syntax of an adjective, while remaining an (oblique case marked) NP (This completely answers the objections of Payne 1995 to an analysis of *kaa* as an adjectival marker.)

The proposal is further illustrated in (14 - 17), where we see simplified c-structures for 'Ram drives a car', 'Ram has driven a car':

(14)

```
                          S
         ┌────────────────┼────────────────┐
         NP               NP               V′
         │                │           ┌────┴────┐
         N                N           V        Aux
         │                │           │         │
       raam             gaRii       calaataa   hai
       Ram.NOM          car.NOM     drive.     AUX.3SG
                                    IMPF.M.SG
```

(15)   *raam*:   (↑CASE)=NOM
       gaRii: (↑CASE)=NOM
       calaataa: agrees with *raam* as highest GF which is marked case nom

(16)

```
                              S
        ┌─────────────────────┼─────────────────────┐
        NP                    NP                    V′
     ┌──┴──┐                  │                 ┌────┴────┐
     N     P^                 N                 V        Aux
     │     │                  │                 │         │
    Ram    ne               gaRii            calaayii    hai
    Ram    NE               car.NOM          drive.      AUX.3SG
    OBL                                      PERF.F.SG
```

(17)   *raam*:   (↑CASE)=OBL
       ne: (↑FORM)=NE
                 ((SUBJ↑)OBJ)
                 ((SUBJ↑)TENSE-ASP)=_c PERF

The verb form *calaayii* agrees with *gaRii* as the sole grammatical function which bears nominative case. The annotations on *ne* state that it constructs a subject and that the f-structure containing that subject also contains an object. This is achieved by means of the inside-out designator, (SUBJ↑). This is interpreted to mean that f-structure corresponding to the mother of *ne*, that is, the f-structure corresponding to the NP *raam=ne*, is the value of a SUBJ attribute. Moreover, the f-structure containing that SUBJ attribute, namely, (SUBJ↑), itself contains an attribute OBJ. This is the way we capture the notion of 'ergative case' in the model of Nordlinger (1998). However, there is no requirement in her model

that what actually constructs a grammatical function has to be a case (as opposed, say, to an adposition). Finally, the annotation ((SUBJ↑)TENSE-ASP)=$_c$ PERF constrains the clause to have a perfective aspect value. The constraint states that the f-structure containing the SUBJ attribute (that is the f-structure of the clause) also contains a TENSE-ASP attribute whose value is constrained to be PERF.[4]

In (18) we see a simplified tree for the recursively embedded possessor construction, together with relevant lexical entries (19):

(18) Possessor construction:

```
                            NP₂
                  _____
                 /            \      \     \
              NP₁             N₂     Pˆ
        _____
       /    |      \
      D    N₁      Pˆ

      us   admii   kii        bahnõ      kaa        (makaan)
    that.OBL man.OBL  KAA.F.SG.OBL  sister.OBL  KAA.M.SG.NOM  (shop)
```
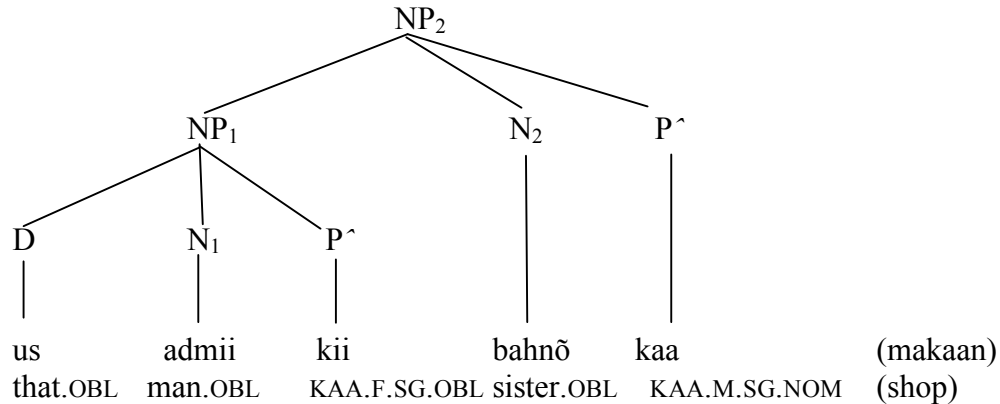
(19)   *kaa*:   (↑FORM)=KAA
                  (POSS↑)
        us agrees with N₁ (= NUM SG, GEN MASC, CASE OBL)
        NP₁ agrees with N₂ (and NP₂ agrees with 'shop')

Again, we make use of the notion of constructive case in order to ensure that the *kaa* postposition creates a POSSESSOR grammatical function by means of the inside-out designator (POSS↑). This annotation says that the mother node of *kaa*, that is NP₁, corresponds to an f-structure which is the value of a POSS attribute. This means that the *kaa*-marked NP is the possessor within NP₂.

6.   Inflecting pronominals
In this section I deal with one remaining objection to the postpositional analysis. As in many languages, pronouns in Hindi behave in a slightly different way from other nominals, in that they seem to have a distinct inflectional forms, corresponding to the *ko*-marked form. In addition the *ne* postposition selects a distinct form of some pronouns. I argue that this does not affect the overall analysis.

The 1st, 2nd person pronouns together with the demonstrative pronouns (which double as 3rd person pronouns), the interrogative pronouns *kyaa* 'what', *kaun* 'who' and the relative pronoun *jo* have a distinct 'accusative/dative' form. In addition, the non-personal

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[4] See Butt and King 2003 for *ne* marking on volitional intransitive subjects and other refinements.

pronominals sometimes have a special form of the oblique plural selected by the *ne* form ((20), Dymšits 1986a: 99f):

(20)   Pronominal inflection

a.   Personal pronouns

	1sg	2sg	1pl	2pl
Direct	mã̄ĩ	tuu	ham	tum
Oblique	mujh	tujh	ham	tum
Accusative/ Dative	mujhe	tujhe	hamẽ	tumhẽ

b.   Other pronominals

	'this'		'that'	
	sg	pl	sg	pl
Direct	yah	ye	vah	ve
Oblique	is	in	us	un
Accusative/ Dative	ise	inhẽ	use	unhẽ
ne form	(is)	inhõ	(us)	unhõ

	rel. pron.		interrog. pron	
	sg.	pl.	sg.	pl.
Direct	jo	jo	kyaa/kaun	
Oblique	jis	jin	kis	kin
Accusative/ Dative	jise	jinhẽ	kise	kinhẽ
ne form	(jis)	jinhõ	(kis)	kinhõ

These portmanteau accusative/dative forms are doublets in the sense that full forms are also possible with the expected postposition, *mujh ko*, *ham ko* and so on.

The special plural forms co-occurring with *ne* do not motivate any change to the case analysis of Hindi (though they require us to make decisions about whether all pronouns have two oblique cases which are syncretized by in the singular). Indeed, the pronominal 'second obliques' are reminiscent of the Russian 'second locative', a special form of the prepositional case found with a hundred or so nouns and used exclusively with the prepositions *v* 'in' or *na* 'on' in their spatial use. A further point to note is that the 1st/2nd pronouns appear in their direct, nominative case form with the postposition *ne*. Again, this is an idiosyncrasy of morphology and does not bear on whether we need to treat the *ne* postposition as a case or not.

However, on the face of it the existence of the accusative/dative portmanteaus suggests that for 'accusative/dative' at least Beard's Criterion is met: there are distinct forms for distinct word classes and so a generalization is missed if we fail to generalize over these forms and set up a CASE attribute (with values {NOMINATIVE, OBLIQUE,

ACCUSATIVE/DATIVE}). However, it would be premature to take this position. First, notice that treating the portmanteaus as separate case forms will offer justification solely for the 'accusative/dative' case form, not for the other Layer II postpositions. Moreover, instances of this sort of sporadic inflection are quite common cross-linguistically in languages for which it is very difficult to motivate a true case system.

We can think of the pronoun portmanteaus as an instance of what Haspelmath (2000) calls 'anti-periphrasis'. This occurs when a normally periphrastic (multi-word) construction is expressed as a single word form, generally for a handful of common lexical items (often function words). Other examples of this sort of thing include inflection prepositions, such as French *du*, a portmanteau for *de* 'of' and *le* 'masc. sg. definite article', or German *zum*, a portmanteau for *zu* 'to' and *dem* 'masc. sg. dative definite article'. Notice that the Hindi situation is rather different from the situation with English pronouns. In English pronouns have retained vestiges of a case system which has been completely lost in the rest of the language. This means that there is no periphrastic construction corresponding to object pronoun forms such as *him* or *us*. In this respect the Hindi system is easier to describe and analyse. Nonetheless, it's worth bearing in mind that even in English the pronouns provide scant evidence for any kind of bona fide case system (Hudson 1995).

There is another reason for being wary of the Hindi pronominal portmanteau evidence. Some pronominals also have a distinctive 'emphatic' form derived from fusion with emphatic particle *hii* (the data in (21) are transcribed from Snell and Weightman 1989: 100; see also Dymšits 1986a: 110 and the discussion in Sharma 2003):

(21)　mujh + hii　　=　　mujii
　　　is + hii　　　=　　isii
　　　ham + hii　　=　　hamı̃ı̃
　　　tum + hii　　=　　tumhı̃ı̃
　　　in + hii　　　=　　inhı̃ı̃

The problem of portmanteau forms generally awaits a satisfactory solution even though it is difficult to find an inflecting language which doesn't exhibit this phenomenon. In any event the problem of inflecting pronouns is hardly unique to Hindi. It has been argued (Spencer 1991: 383, Wescoat 2002) that English personal pronouns show inflection for tense/aspect/mood categories. The reduced auxiliary verb component of forms such as *she'll*, *they've*, *I'm* show all the properties of being true affixes rather than simple clitics, which means that, morphologically speaking, such forms are inflected forms of the pronoun.

An important aspect of the Hindi pronoun portmanteaus, including the emphatic forms, is that they consist of a single word form which seems to occupy two adjacent 'slots' in syntactic structure. This property is also true of the Romance/German prepositional portmanteaus. A simple but effective treatment of such constructions has been offered by Wescoat (2002). He argues that languages sometimes exhibit 'lexical sharing'. Modifying the traditional conception of lexical insertion somewhat he argues that portmanteaus

represent a deviation from the default, canonical mapping between word forms and syntactic terminals. Normally, syntactic terminals and word forms are in a one-one correspondence. However, Wescoat argues that portmanteaus prove that we must countenance the possibility that adjacent syntactic terminals, even if part of distinct constituents can be mapped to a single word form. Wescoat provides a formalization of this idea within LFG, demonstrating that the proposal can be incorporated relatively straightforwardly into the existing architecture.

The Hindi pronouns inflected for case or emphasis can therefore be regarded as portmanteau forms of the uninterrupted linear sequence of pronoun + postposition or pronoun + emphasis particle. More generally, the solution to the problem of the pronominals is a solution to the problem of portmanteau forms. It has nothing specifically to do with case and the pronoun forms provide motivation for extending the analysis of Hindi case beyond what is necessary for inflecting nouns generally.

7. Conclusions

The only justification for setting up a CASE attribute in Hindi is provided by the three Layer I inflections: nominative, oblique, and the almost universally neglected vocative. Formatives which have recently come to be treated as case markers, the Layer II clitic postpositions, do not justify setting up an additional attribute, any more than prepositions in English justify a CASE attribute. The Layer I inflections require appeal to a CASE attribute because their forms depend on the inflectional class and grammatical number of the noun. Thus, generalizations would be lost if we try to define their distribution solely in terms of their morphological forms. In the syntax a CASE attribute is required because modifiers show agreement for case and because Layer II postpositions select the oblique case form of the noun they combine with. The Layer II postpositions show none of these effects. If we wish to refer to the fact that a transitive subject is marked with the *ne* postposition all we need to do is to refer to the form of that postposition, and write a rule, constraint or equation which maps the relevant grammatical function to a word identified as FORM NE. Giving such forms an additional case label is completely superfluous.

The other respect in which CASE impacts on the morphosyntax of Hindi is in predicate agreement. Verb forms derived historically from participles show agreement with the highest ranking nominative NP. That is, the verb agrees with a nominative marked subject, and if there is no such subject but there is a nominative object the verb agrees with the object. If there are no subjects or objects in the nominative then the verb takes the default masculine singular form. If the Layer II postpositions are really cases then we have an uneasy tension between the set of case features required for modifier agreement (appealing to the inflectional nominative/oblique distinction) and the set of case features required for predicate agreement (which sets nominative NPs, lacking postpositions, from any NP combined with a postposition, including the transitive subject *ne* postposition). In effect, the term 'nominative' is being used in two distinct (but unacknowledged) senses. This, leads to needless complications, as I have shown.

By adopting Toivonen's (2003) notion of 'non-projecting word' we can easily reconcile the two agreement principles. The Layer II postpositions are syntactic terminals, but

morphologically they are phrasal affixes. This means that we can treat them as words which fail to project a phrase. They adjoin directly to the NP to which they apply, but since they fail to project, the categorial features of the host NP remain unchanged. In particularly, this means that the case value of the NP will remain that of the head noun, namely, oblique. We can now introduce a simple constraint into the predicate agreement principles stating that predicates only agree with CASE NOM NPs. The 'nominative' feature value of both modifier agreement and predicate agreement thus denotes the same formal entity, and there is therefore no prevarication over the case labelling.

Analyses of Indo-Aryan languages which automatically label the Layer II postpositions as cases are guilty of introducing a totally redundant feature into the grammar, but the motivation for this is easy to understand. The Layer II postpositions are the markers par excellence of grammatical functions, and this is the function par excellence of traditional cases. Yet it seems odd to say that subjects and objects are regularly realized as postpositional phrases. Moreover, the feature 'nominative' seems to play an important role in the morphosyntax of agreement, so it seems necessary to set up a case attribute. The idea that the Layer II postpositions are categorially deficient, and fail to project a phrase solves all of these analytical problems and permits us to do justice to all aspects of the nominal morphosyntax of the Indo-Aryan language group.

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